

PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 97 (GEORGIA AVE) AND PLYERS MILL RD IN MONTGOMERY COUNTY. THE RECONSTRUCTION WILL REPLACE EXISTING GREEN STRAIN POLES WITH MAST ARM SIGNAL POLE(S) AND PEDESTRIAN PHASES WITH APS/CPS ACROSS THE SOUTH, EAST AND WEST APPROACHES OF THE INTERSECTION. THE PROJECT WILL ALSO CHANGE THE PHASING OF THE LEFT TURN ALONG MD 97 NB FROM AN EXCLUSIVE/PERMISSIVE PHASE TO EXCLUSIVE ONLY AS WELL AS ADD AN EXCLUSIVE LEFT TURN PHASE FOR MD 97 SB. MD 97 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

II. INTERSECTION OPERATION

- THE INTERSECTION SHALL OPERATE IN A NEMA SIX (6) PHASE, SEMI-ACTUATED MODE. BOTH NORTHBOUND AND SOUTHBOUND MD 97 APPROACHES AND THE PEDESTRIAN MOVEMENT ACROSS PLYERS MILL RD SHALL OPERATE CONCURRENTLY. AN ACTUATED AUDIBLE PEDESTRIAN PHASE SHALL BE PROVIDED TO CROSS PLYERS MILL RD. THERE WILL ALSO BE LEADING EXCLUSIVE LEFT TURN MOVEMENTS FOR BOTH MD 97 APPROACHES. BOTH EASTBOUND AND WESTBOUND APPROACHES OF PLYERS MILL RD SHALL OPERATE CONCURRENTLY. ALTERNATE AUDIBLE PEDESTRIAN PHASE WITH AUDIBLE PEDESTRIAN SIGNALS SHALL BE PROVIDED TO CROSS MD 97.
- A PROPOSED NEMA FULL-TRAFFIC-ACTUATED, EIGHT (8) PHASE CONTROLLER IN A NEMA SIZE "S" BASE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION.

III. SPECIAL NOTES

APS WILL FUNCTION AS FOLLOWS:
TO CROSS MD 97 (GEORGIA AVE)

- WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE: "WAIT TO CROSS GEORGIA AT PLYERS MILL. WAIT."
- WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

TO CROSS PLYERS MILL RD

- WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE: "WAIT TO CROSS PLYERS MILL AT GEORGIA. WAIT."
- WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

EQUIPMENT TO BE FURNISHED AND INSTALLED BY MONTGOMERY COUNTY

QUANTITY	DESCRIPTION
1EA	MONTGOMERY COUNTY INTERCONNECT SPLICE CABINET

EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

ITEM NO.	QUANTITY	DESCRIPTION
9104	1EA	CONTROLLER CABINET, SIZE "S" W/CTRL. VIDEO INT. 1-8 CAM
9571	128 SF	SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN 2 EA - M1-5(4) (MOD) 'GEORGIA AVE' (78"x36") 2 EA - D-3(1) 'GEORGIA AVE' (VARx16") 2 EA - D-3(1) 'PLYERS MILL RD' (VARx16") DUAL FACE 2 EA - R3-5 (30"x36") 6 EA - R10-3(1) PUSHBUTTON SIGN (9"x15") 2 EA - D3-2(1) 'PLYERS MILL RD NEXT SIGNAL' (72"x24")

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
1001	3 EA	MAINTENANCE OF TRAFFIC
2002	4 CY	TEST PIT EXCAVATION
5001	1EA	REMOVAL OF EXISTING PERMANENT PAVEMENT MARKINGS SYMBOLS OR LEGENDS
5003	1455 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS
5004	395 LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
5005	95 LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
5006	31 SF	WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
6001	230 LF	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	1290 SF	5 INCH CONCRETE SIDEWALK
6003	85 SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
8001	42 EA	12 INCH LED SIGNAL HEAD SECTION
8002	1EA	2-WIRE CENTRAL CONTROL UNIT
8008	6 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
8009	5 EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8012	1EA	EMBEDDED METERED SERVICE PEDESTAL
8016	6 EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
8018	1EA	MAST ARM POLE & 38' MAST ARM ANY 'T' DIMENSION
8019	3 EA	MAST ARM POLE & 50' MAST ARM ANY 'T' DIMENSION
8024	1EA	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
8028	4 EA	VIDEO DETECTION CAMERA AND CABLE ANY LENGTH
8030	175 LF	1-CONDUCTOR ELECTRICAL CABLE, NO. 2 AWG/THHN
8031	210 LF	12-PAIR COMMUNICATION CABLE, SELF-SUPPORTING, JELLY-FILLED/UNDERGROUND
8037	355 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED
8038	235 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
8039	60 LF	WOOD SIGN SUPPORTS UP TO 4' X 6'
8040	128 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8042	390 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8045	60 LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
8046	4 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8053	665 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8055	1190 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8056	1485 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8063	1EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT

C. IF THE CABINET IS TO BE REMOVED SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE NEW SIGNAL.

CONTACTS

DISTRICT (DISTRICT 3 - MONTGOMERY)

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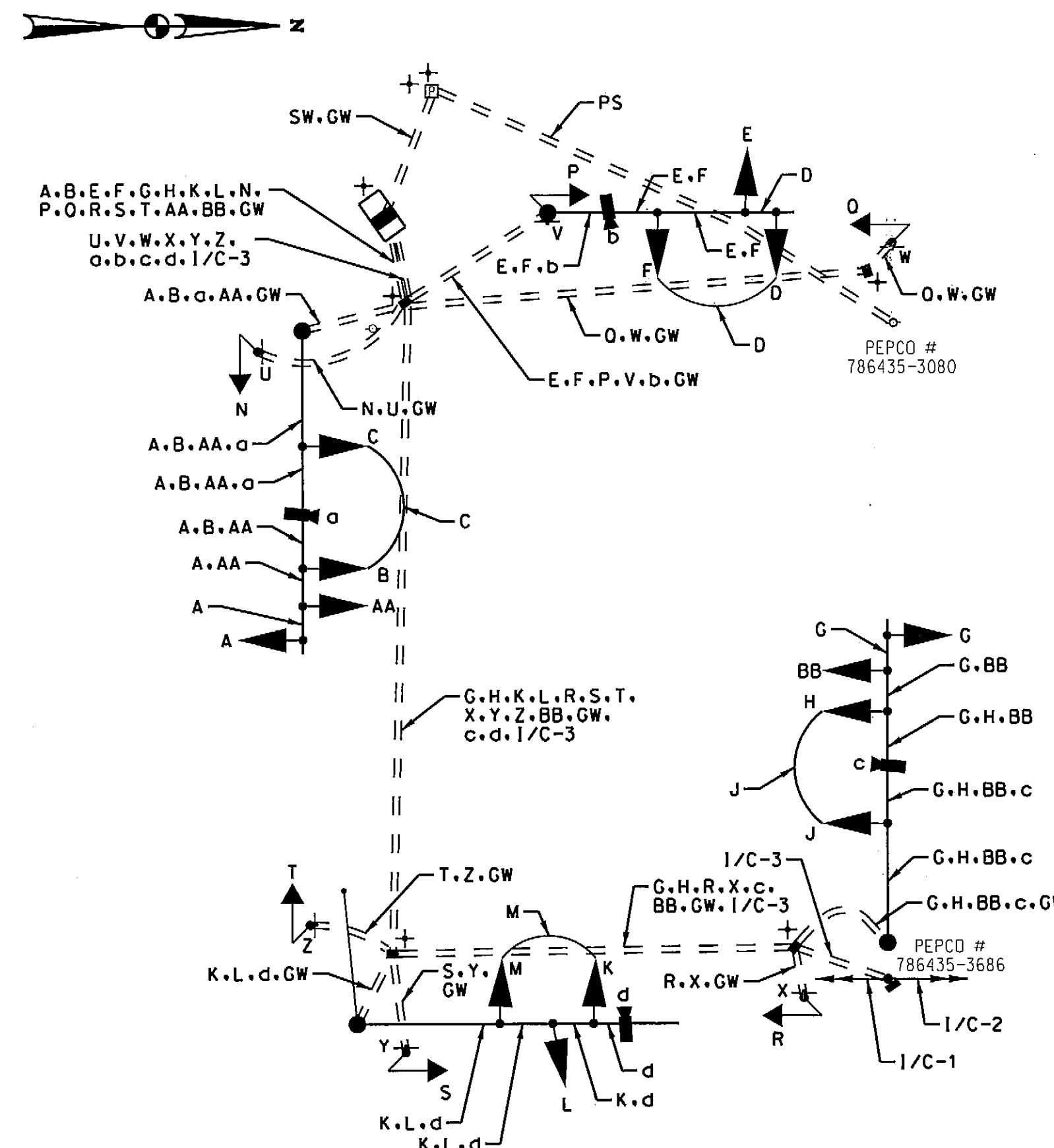
MR. MICHAEL STOCKER
SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE)
410-787-7696



PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PHASE 1 & 5	◀G-	◀G-	R	R	◀G-	◀G-	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 & 5 CHANGE	PHASE 1 & 5 CHANGE MAY CHANGE TO PHASE 1 & 6, 2 & 5 OR 2 & 6																			
PHASE 1 & 6	◀G-	◀G-	G	G	◀R-	◀R-	R	R	R	R	R	R	R	R	WK	WK	DW	DW	DW	DW
1 & 6 CHANGE	◀Y-	◀Y-	G	G	◀R-	◀R-	R	R	R	R	R	R	R	R	WK	WK	DW	DW	DW	DW
PHASE 2 & 5	◀R-	◀R-	R	R	◀G-	◀G-	G	G	R	R	R	R	R	R	DW	DW	DW	DW	WK	WK
2 & 5 CHANGE	◀R-	◀R-	R	R	◀Y-	◀Y-	G	G	R	R	R	R	R	R	DW	DW	DW	DW	WK	WK
PHASE 2 & 6	◀R-	◀R-	G	G	◀R-	◀R-	G	G	R	R	R	R	R	R	WK	WK	DW	DW	WK	WK
PED. CLEARANCE	◀R-	◀R-	G	G	◀R-	◀R-	G	G	R	R	R	R	R	R	FL/DW	FL/DW	DW	DW	FL/DW	FL/DW
2 & 6 CHANGE	◀R-	◀R-	Y	Y	◀R-	◀R-	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4 & 8	◀R-	◀R-	R	R	◀R-	◀R-	R	R	G	G	G	G	G	G	DW	DW	DW	DW	DW	DW
4 & 8 CHANGE	◀R-	◀R-	R	R	◀R-	◀R-	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 4 ALT	◀R-	◀R-	R	R	◀R-	◀R-	R	R	G	G	G	G	G	G	DW	DW	WK	WK	DW	DW
PED. CLEARANCE	◀R-	◀R-	R	R	◀R-	◀R-	R	R	G	G	G	G	G	G	DW	DW	FL/DW	FL/DW	DW	DW
4 ALT CHANGE	◀R-	◀R-	R	R	◀R-	◀R-	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	◀FL/R	◀FL/R	FL/Y	FL/Y	◀FL/R	◀FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING KEY

A.E.F.G.H.K.L.	- 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
AA.BB	
B.C.D.H.J.M.	- 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
N.P.O.R.S.T.	
U.V.W.X.Y.	- 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
Z	
a.b.c.d	- VIDEO DETECTION LEAD-IN CABLE
SW	- 3-1 CONDUCTOR ELECTRICAL CABLE (#8 AWG THHN/THWN)
GW	- 1 CONDUCTOR (NO. 6 AWG) STRANDED BARE COPPER GROUND WIRE
PS	- 3-1 CONDUCTOR ELECTRICAL CABLE (NO. 2 AWG/THHN)
1/C-1	- 50-PAIR INTERCONNECT TO DENNIS RD.
1/C-2	- 50-PAIR INTERCONNECT TO WINDHAM ST.
1/C-3	- 12-PAIR INTERCONNECT CABLE-JELLY FILLED
+	- PROPOSED GROUND ROD

TOD NO: XY224-28
SHA NO: MD14595C
MD 97 @ Plyers Mill Road



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 97 (GEORGIA AVE) AT PLYERS MILL RD
SIGNAL RECONSTRUCTION
WHEATON, MD

GENERAL INFORMATION SHEET

SCALE: 1" = 20' DATE: FEBRUARY 13, 2013 CONTRACT NO.: XY2245185

DESIGNED BY	JEK	COUNTY	MONTGOMERY
DRAWN BY	JEK	LOGMILE	15009702.65
CHECKED BY	KMP	TMS NO.	L205
		TOD NO.	

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FILE: SPLES